

Remember

1. A **parallelogram** is a quadrilateral (four-sided polygon) with these properties:

- its opposite sides are parallel
- its opposite sides are congruent
- its opposite angles are congruent
- its diagonals bisect each other



2. A **rhombus** is a parallelogram with four congruent sides. Its diagonals are perpendicular to each other and bisect opposite angles.



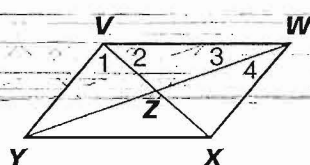
3. A **rectangle** is a parallelogram with four right angles. Its diagonals are congruent.



4. A **square** is a parallelogram with four congruent sides and four right angles. A square is both a rhombus and a rectangle.



Use the properties to solve for the missing measures. Shade your answers below to reveal the answer to this riddle: *What keeps a square from moving?*



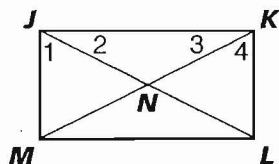
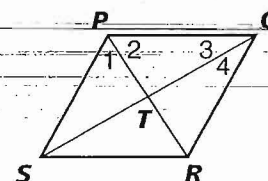
1. Given: $VWXY$ is a parallelogram. $VW = 14$ $WX = 9$ $VZ = 5.5$

$m\angle VYX = 52^\circ$ $m\angle 2 = 40^\circ$ $m\angle 3 = 20^\circ$

- a. $XY = 14$ c. $m\angle VWX = 52^\circ$ e. $m\angle 4 = 32$
b. $VX = 11$ d. $m\angle YVW = 128^\circ$ f. $m\angle 1 = 88$

2. Given: $PQRS$ is a rhombus. $PQ = 4$ $m\angle PQR = 60^\circ$

- a. $QR = 4$ c. $m\angle 2 = 60$ e. $ST = 2\sqrt{3}$
b. $m\angle 3 = 30$ d. $PT = 2$ f. $m\angle SPQ = 120$



3. Given: $JKLM$ is a rectangle. $JK = 16$ $KL = 12$ $m\angle 1 = 53^\circ$

- a. $m\angle JKL = 90^\circ$ c. $m\angle 2 = 37^\circ$ e. $m\angle JNK = 106^\circ$
b. $JL = 20$ d. $m\angle 4 = 53^\circ$ f. $MN = 10$

4. Given: $ABCD$ is a square. $AB = 8$

- a. $BC = 8$ c. $m\angle 2 = 45$ e. $EC = 4\sqrt{2}$
b. $m\angle ABC = 90$ d. $AC = 8\sqrt{2}$ f. $m\angle BDC = 45$

